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ABSTRACT

This brochure describes some of the many recycling program options that schools can implement in their communities. It focuses on implementing actual recycling projects as a way of teaching the importance and benefits of recycling. The text examines the solid waste crisis and why Americans cannot continue to possess a disposable mentality. It emphasizes how a school recycling program can impart valuable hands-on experience that encourages students to make recycling a part of their lifestyle. Such programs can help young people become active learners, enabling them to apply their classroom skills to solve real problems. Four types of school recycling programs are outlined: (1) an occasional or one-time recycling drive where students collect recyclables at home and bring them to school on one or more designated days; (2) an ongoing in-school recycling program where recyclable materials generated at school are recycled on site; (3) an ongoing account with a local recycling center; and (4) establishing community collection points at the school so that individuals can drop off their recyclables. Ten steps on getting starting, such as selecting the type of program that will work, making municipal contacts, identifying a local market for recyclables, and working out a budget are presented. Also included are instructions for how schools can apply for regional and national awards, like the President's Environmental Youth Awards. (Contains seven references, nine sources for educational materials, and addresses and phone numbers for the EPA regional contact offices.) (RJM)

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# School Recycling Programs
## A Handbook for Educators

August 1990

United States Environmental Protection Agency
Solid Waste and Emergency Response (OS-305)
EPA/530-SW-90-023

EF 605 069

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Solid Waste and Emergency Response (OS-305)

EPA

# School Recycling Programs

## A Handbook for Educators

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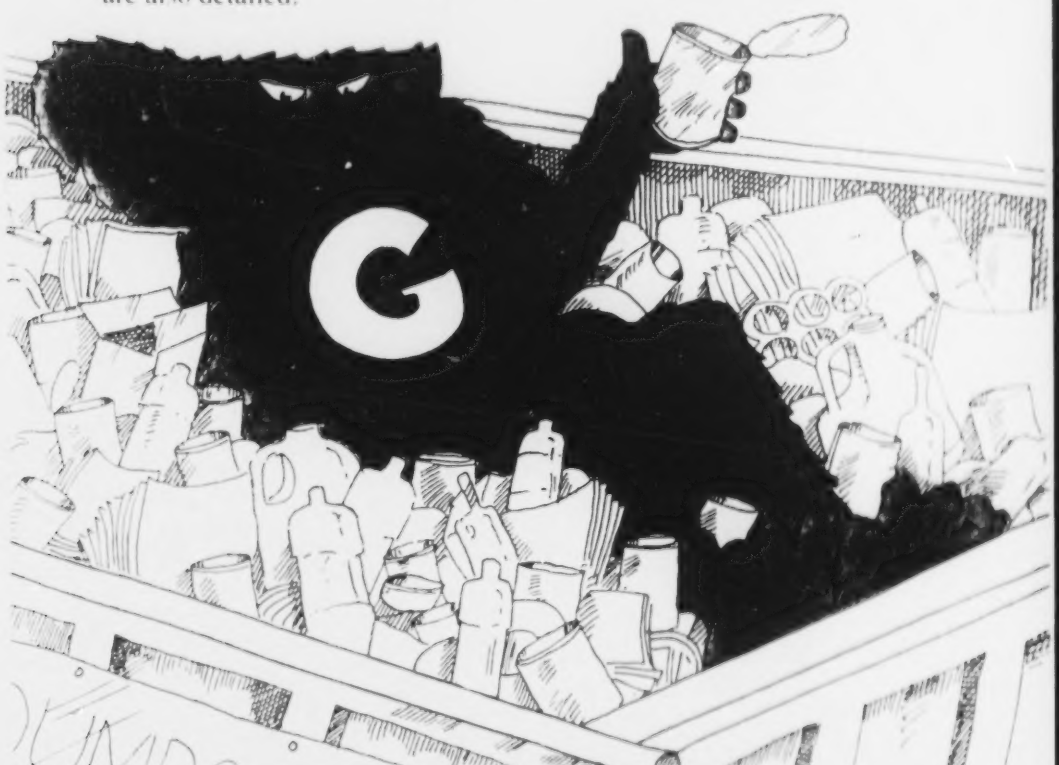
# School Recycling Programs: A Handbook for Educators

This brochure describes a number of school recycling program options, along with step-by-step instructions on how to set one up. It focuses on implementing actual recycling projects as a way of teaching the importance and benefits of recycling. Because school recycling projects are excellent candidates for the President's Environmental Youth Awards, which are administered by EPA, instructions for how schools can apply for these regional and national awards are also detailed.




The "Garbage Gremlin" represents the wasteful habits many of us unknowingly perpetuate. In the various educational materials developed by EPA, students are encouraged to recognize and reject the ways of the "Gremlin" as they learn how to be responsible, environmentally conscious citizens.

## The Solid Waste Crisis

Americans can no longer simply forget about their garbage when it leaves their curbsides each week. The United States currently generates nearly 180 million tons of municipal solid waste per year— enough to fill a convoy of garbage trucks that would encircle the earth more than six times! If this trend continues, this amount is expected to reach 216 million tons by the turn of the century.

At the same time, we are running out of places to put all this trash. Approximately 73 percent of our garbage is currently disposed of in landfills, but nearly one third of the nation's landfills will close in the next several years. Few new landfills and incinerators are being built to replace these facilities due to public concerns about environmental, economic, property, and nuisance problems.

For some communities, this dilemma has already reached crisis proportions. For others, the crisis still looms in the future. In any case, the problems associated with solid waste generation and management will not disappear, and without action they are likely to become worse. Therefore, the time for all communities to deal with the solid waste dilemma is now.

## The Importance of Recycling

Every sector of our society—governments, companies, institutions, communities, and individuals—contributes to the garbage problem. In fact, each American generates an average of 4 pounds of trash per day. We all, therefore, must cooperate in efforts to solve the problem.

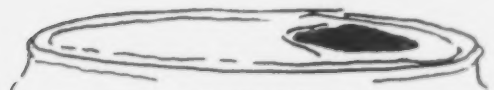
One important step we can take individually and collectively is to recycle more of our discards. Recycling not only helps alleviate the trash disposal problem, but also conserves scarce natural resources. In addition, recycling can:

- Reduce demands on scarce landfill and incinerator capacity.
- Reduce risks to our health and environment from improper disposal of some hazardous wastes, such as used oil.
- Reduce air and water pollution that may be caused during the manufacture of new products.
- Reduce the demand for energy and the need for raw materials used in the manufacture of new goods.
- Reduce costs, especially when avoided landfill and incinerator "tipping fees" are considered.

Many communities have already recognized the benefits of recycling, as witnessed by the growing number of recycling programs across the country. These programs, now numbering over

**DID YOU KNOW? Recycling 1 ton of paper saves 17 trees.**

8,000, are enabling many states and communities to set and surpass ambitious recycling goals. As a nation, we currently recycle about 10 percent of our municipal solid waste. The U.S. Environmental Protection Agency (EPA) has challenged the nation to increase recycling in the years ahead. EPA's goal for the nation is to reduce and recycle at least 25 percent of our waste by 1992.



### Facts About Metal Cans

Metals are valuable resources that can often be more easily recovered and reused than mined. For this reason, metals recycling is an established practice in many parts of the country. Aluminum and tin (actually tin-coated steel) cans are some metal items that schools have successfully recycled over the years.

There are established markets for aluminum cans nationwide, and recycling them can be quite profitable. Most soft drink and beer cans are made from aluminum. Soup and fruit cans, on the other hand, are made of tin-coated steel, or aluminum and steel. These cans are also recyclable, although a different process is used, and markets may be more difficult to find for them than for aluminum cans.

An easy way for your students to tell steel cans from aluminum ones is to hold a magnet to them; aluminum cans won't be attracted. If you plan to collect many mixed metal cans, you may be able to borrow magnetic sorting tables from can recycling companies. Check with your local can recycler.

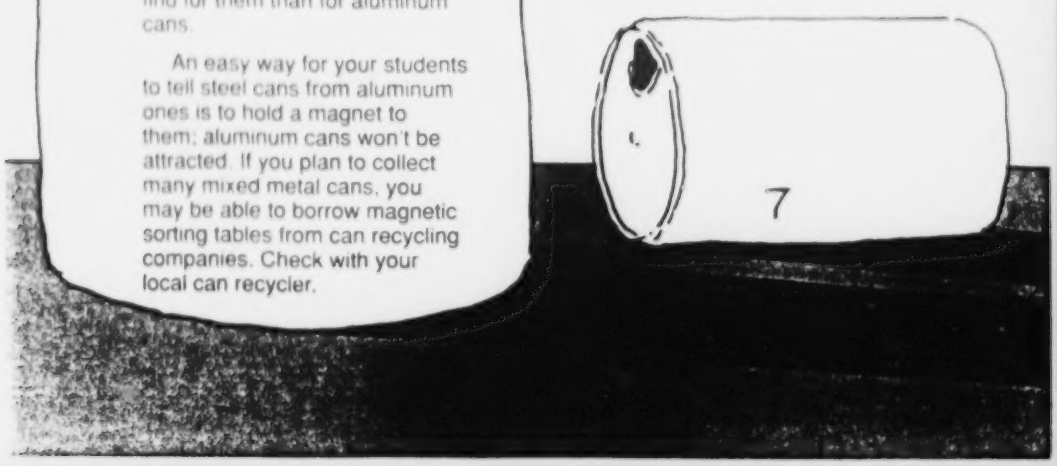
## School Recycling Programs

Schools are vital forums for educating young people and the community about the problems and solutions of solid waste management. One practical, relatively easy way to introduce students to the benefits of recycling is to implement a recycling program in your school.

A school recycling program can impart valuable hands-on experience that encourages students to make recycling a part of their lifestyle—not only at school, but also at home and in the future. Such programs can help young people become active learners and apply their classroom skills to solve real problems. In this way, students come to realize that they can make a difference.

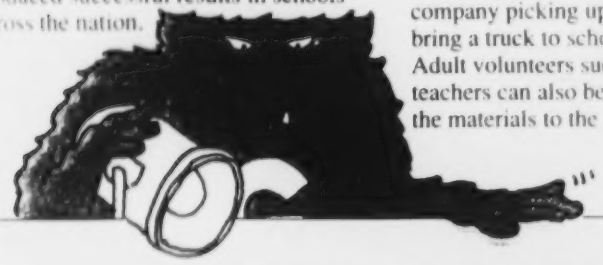
In addition, recycling programs can often generate funds for school departments or organizations. Many schools have generated $2,000 or more through their recycling programs. One school in Washington State that runs its own recycling center even earned over $40,000 in a single year!

A well-run school recycling program can benefit the community as well. Local recyclers will receive an increased flow of recyclable materials. Citizens can take an active role in managing their waste. In addition, a school recycling program can strengthen the relationship between the school and the rest of the community.



## Four Types of School Recycling Programs

The type of recycling program you decide to run is very dependent on your school's situation. Available funds, time, size of school, and community resources are all variables that will enter into your decision. The following program options, however, are popular methods that have produced successful results in schools across the nation.



### 1. Conduct an occasional or one-time recycling drive.

One option is to run a one-time or occasional drive during the school year or at intervals (once a semester, for example). In their homes, students collect recyclables such as aluminum cans, newspapers, or glass bottles and bring them to school on one or more designated days. You can arrange for the company picking up the recyclables to bring a truck to school on those days. Adult volunteers such as parents or teachers can also be recruited to transport the materials to the recycling company.

### Spotlight on Success: One-Shot CAN Work

Aluminum cans are a popular and profitable choice for school recycling drives. The Midlothian Middle School in Richmond, Virginia, has run a successful aluminum can recycling drive once a year for the past 5 years. In 1987, the 1,275 students collected a total of nearly 125,000 cans, and earned more than $2,000 for their science department.

Students collected and kept cans at home during the fall semester. On 2 designated days, students brought their cans to school for pickup by an aluminum can recycling company. While teachers loaded cans in the company's truck, students tallied the number of cans collected.

The cans had to be meticulously counted because a comprehensive prize structure was in place: first, second, and third place prizes were awarded for the most cans collected in the school; the most cans collected in each class; and for the class with the most cans per student. Movie tickets were awarded to every student collecting more than 500 cans, and students who collected more than 50 cans saw a movie on campus in place of two science classes.

To publicize the program, the school sent home a letter explaining the program at the beginning of the school year. Follow-up announcements and posters at school reminded students to bring in cans throughout the collection period. This publicity, along with the prize system, motivated over 85 percent of the student body to participate in this highly successful program.

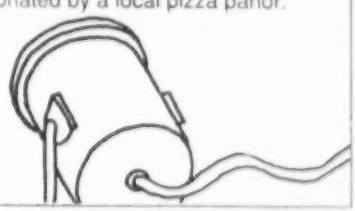
## Spotlight on Success: Long-Term Recycling Is Elementary

An ongoing aluminum recycling program can be an excellent source of community pride, as witnessed by the Berkeley Elementary School in Williamsburg, Virginia. Although started for the student body, the school program became a focal point for aluminum can collection in the community. In 3 months, students and community members collected over 3 tons of aluminum, worth over $2,000.

To set up the program, the school converted an old storage shed into a "recycling center," and contacted an aluminum recycling company to arrange for bi-weekly pickup of the collected cans. Two student council representatives from each homeroom were responsible for counting and gathering the collected cans. The responsibility of storing the cans was rotated among homerooms, and thus many students were able to participate. Each classroom teacher posted weekly totals, and the recycling coordinator summed the weekly results for the school.

Active teacher support and high-visibility publicity helped make the program a success. An assembly kicked off the program, which was broadcast on the local cable television channel. School public address announcements of class totals generated healthy competition.

Several prizes were awarded, which also encouraged participation. The top prize for the most cans collected was an aluminum frame bicycle. In addition, when the school met its initial goal of 1 ton, everyone was awarded a pizza party, which was donated by a local pizza parlor.



Any proceeds from the collection go back to the school.

This option does not require long-term storage space at school, which is a consideration with other options. It does, however, assume extra space in the students' homes is available for accumulated materials before they are brought to school.

### 2. Operate an ongoing in-school recycling program.

Another option involves setting up a permanent, in-school collection center for recyclables generated at home or at school. If your community has curbside recycling or a drop-off center, students can recycle materials generated at school (such as paper from schoolwork and cans from lunch) without duplicating community efforts. This type of program requires that a storage space for the collected recyclables be available at your

school. It also is necessary to arrange for the recyclables to be collected from school fairly frequently.

Even though an in-school, long-term recycling program requires careful planning and continuous support, it also offers great rewards. It allows students to see the results of their collection efforts on a daily or weekly basis, and, depending on how the program is set up, even participate in running the program. An in-school program will also greatly encourage the habit of recycling since students will make it part of their daily routines.

### 3. Establish an ongoing account with a local recycling center.

Another option is to arrange the program through a local recycling center. Students and parents bring their recyclables directly to the center at their convenience. Your school can set up an account with the center so that payments for materials brought in by students are directly credited to your school.

This option does not require your school to set up storage space or handle recyclables at school. It is important, however, to provide a base at school for the recycling drive. Classroom activities and school publicity will reinforce recycling lessons and increase participation. If the school informs the community of its drive, residents may donate recyclables at the center for the school as well.

### 4. Set up community collection points at school.

This option entails setting up a collection center at your school that the entire community can use. Since schools often serve as focal points for local residents, they are ideal drop-off points for recycling.

A storage facility where individuals can drop off their recyclable "donations" needs to be established in an easily accessible place, such as a parking lot. You can either arrange for pickup of the collected items or enlist school and community members to transport the collected materials to the recycling company. Since this program directly involves the community and depends on the support of its residents, it is important to target these people in your publicity efforts.

**HEAVY METAL: Aluminum cans have been easily and profitably recycled in many schools.**

## Ten Steps to Get Started

1. Select the type of recycling program you are going to run.
2. Organize a coordination team.
3. Decide which recyclables to collect.
4. Identify a local market for recyclables.
5. Work out a budget.
6. Make municipal contacts.
7. Establish a system for collecting and storing recyclables.
8. Educate the school and the community about the program.
9. Set overall and individual goals.
10. Reward the doers.

Each of the four program options has different requirements in terms of storage space, time commitment, type of recyclable, student interest, and so on. As you consider these steps, which are described in more detail in the following pages, think carefully about whether your school has the ability to meet the necessary requirements. Also, keep in mind that these ten steps outline *general* guidelines. You may encounter other issues specific to your school that need to be resolved as well.

**LENDING A HAND: Young people in communities across the nation are making changes in their habits to help preserve the environment.**

### 1. Select the type of recycling program you are going to run.

You can model your program after one of the four options presented earlier, or "custom-design" a program to fit your school's needs. Since the success of the program will depend upon the interest and enthusiasm level of the school community, let them help you make this decision.

Distribute a survey in school for students and parents, asking specific questions about their willingness to participate. Would they be willing to keep recyclable materials at home? Would they be able to bring the recyclables to school or to school-run recycling centers? After the survey has been completed, use the results to gauge which type of program would be most suitable for your school.

### 2. Organize a coordination team.

A coordination team will help the program run smoothly. In addition to being responsible for program planning, publicity, and operation, the team makes recycling fun for students. The team should include students, parents, teachers, the custodian, and a community representative. A coordinator, or "inside champion" (someone who generates enthusiasm and support for the program), is also essential. A department director or teacher whose program benefits from the recycling effort is a good choice for program coordinator, but anyone at school with enthusiasm for recycling will make an excellent coordinator.

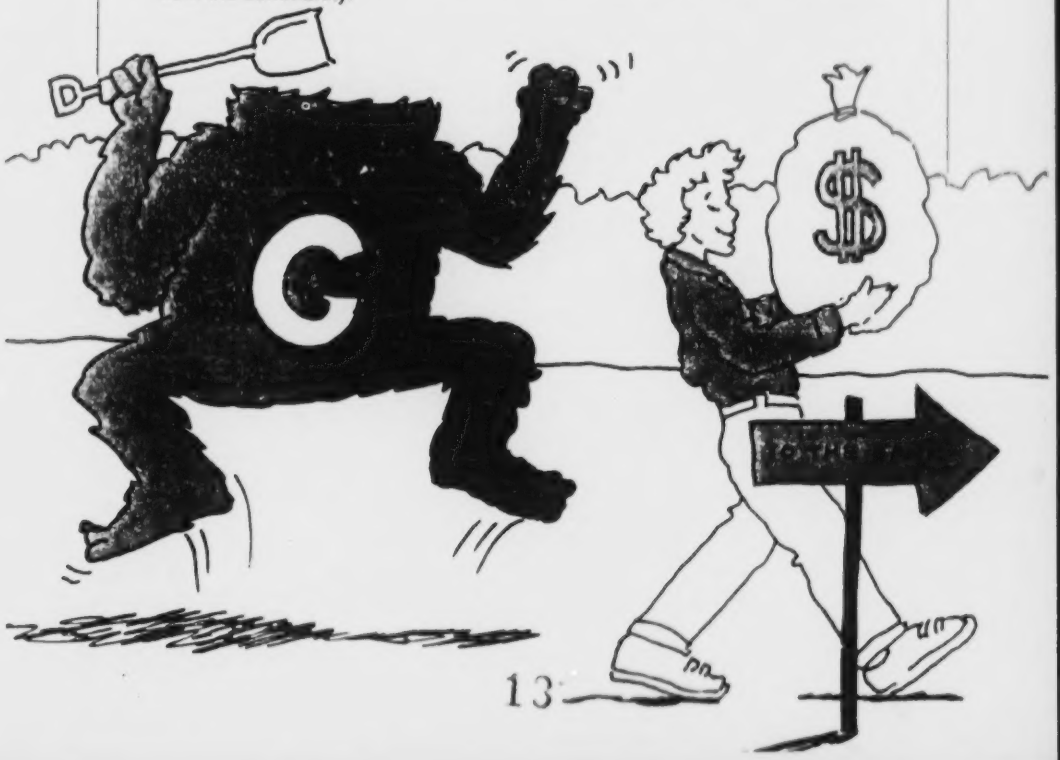
## Spotlight on Success:
## How Far Can You Take Your Program?

Almost 20 years ago, students at Mercer Island High School, Mercer Island, Washington, began a monthly collection of tin cans. They expanded their collection to bottles and aluminum containers, and soon amassed a small fortune. In 1975, the group of students, called the Committee to Save the Earth, began a drive to build a permanent recycling center. Today, what started as a small venture has become a more than $40,000 a year business for the Mercer Island High School.

Students from the Committee to Save the Earth, as it is still called, staff the Mercer Island Recycling Center, which serves as a focal point for student activism and action on environmental issues. The Center is managed by students, who also make decisions regarding its operation.

The Recycling Center accepts a variety of recyclables, such as mixed paper, plastic containers, glass bottles and jars, foil, aluminum cans, tin cans, newspaper, and corrugated cardboard. The Center has seen its amount of recyclables processed grow from less than 300 to 1,400 tons per year. It currently serves 21,000 Mercer Island residents as well as the school.

Proceeds from the recycling center fund part-time student and staff jobs, school student activities, environmental speakers, trips and projects, library resources, and college scholarships. Community members who donate recyclables can designate to which school they want their donations to be credited. This program is an example of the high degree of success that can be attained through student initiative and active support from the community.



## Spotlight on Success: Rhode Island Closes the Loop

The smallest state is undertaking what may be the most ambitious recycling program yet. Rhode Island plans to set up school recycling programs state-wide in the 1990-91 school year. Pilot programs have already been established in three school districts to determine the specifics of the program, such as collection containers, collection systems, and designated recyclables.

Since Rhode Island has implemented mandatory curbside recycling, the school recycling programs will focus on materials generated by the schools themselves. These include classroom paper, aluminum cans, and glass containers.

While many markets exist for school-discarded cans and glass, finding a market, or closing the recycling "loop," for the schools' paper is proving to be a challenge. Most of the paper the schools use has already been recycled. It is, therefore, of a low grade and unsuitable for making into high-grade paper. Consequently, state program coordinators are investigating innovative paper product markets; some ideas include making the collected paper into paper towels, tissue, and even compost!

This type of advance planning can identify potential obstacles that have to be overcome, and greatly increase the future success of your recycling program.

### 3. Decide which recyclables to collect.

Deciding which types of materials you are going to recycle is a big step, for there are many choices and issues to consider. Materials typically recycled include aluminum; tin cans (steel); glass containers; newspapers; and high-grade paper, including notebook paper, copy paper, and computer paper. Some communities have also collected plastic recyclables, such as milk jugs and soft drink containers; Christmas trees; and other materials. *No material should be collected for which there isn't an existing local market unless special arrangements can be made with a buyer* (see Step 4). As consumers, we can all help to create markets by purchasing products made of recycled materials, such as recycled paper.

Safety issues should also be considered. For example, if the recycling program is at an elementary school, glass beverage containers should be handled only by adults or under supervision. Junior and senior high school students, on the other hand, should be able to handle glass themselves. Heavy gloves and goggles should be worn while handling quantities of collected glass.

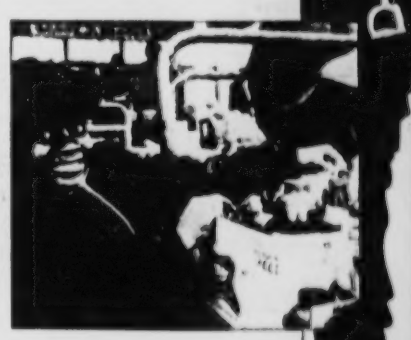
## Facts About Glass

Many types of glass can be recycled. Glass food and beverage containers are 100 percent recyclable and can be reused an infinite number of times. The only glass items that cannot be recycled are light bulbs, ceramic glass, dishes, and plate glass.

There are three primary colors of glass: green, clear, and brown. Find out which colors your local recycler takes. If more than one color is accepted, you may be required to separate your glass by color. Labels can be left on the glass, but check with the recycling center about metal tops and rings; some centers require that they be removed.

## Spotlight on Success: Schools Cash In on Glass

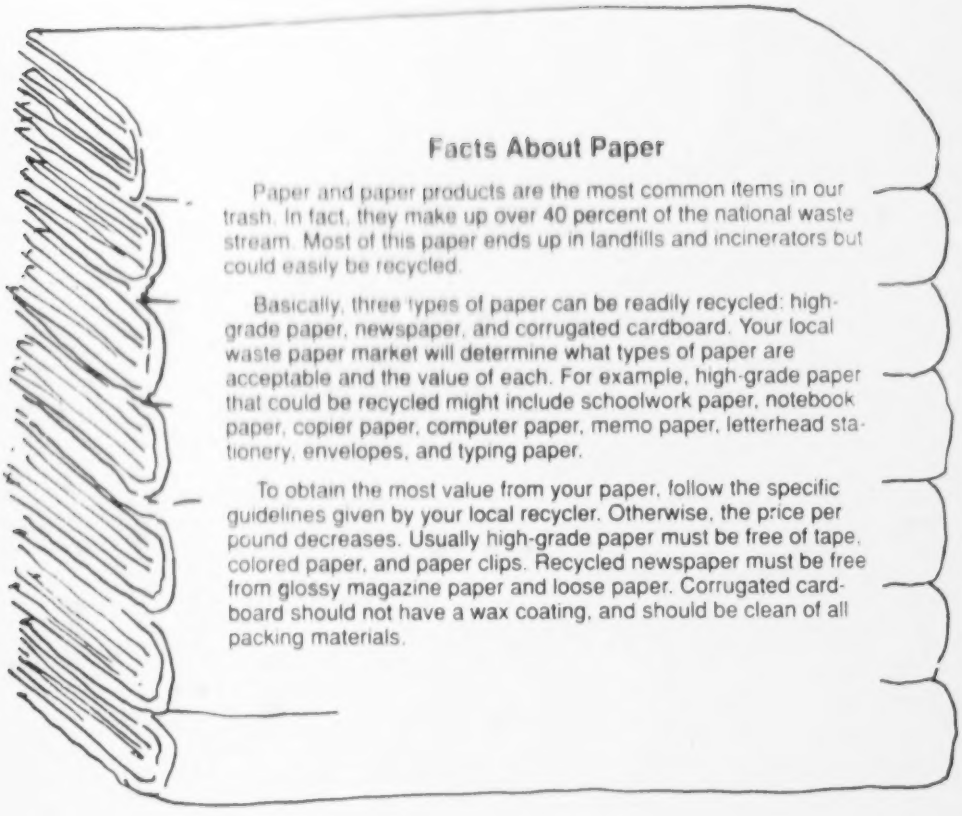
Recycling is always rewarding — both for the hands-on learning it provides and for its environmental benefits. For students in Augusta Raa Middle School in Leon County, Florida, recycling was also extremely profitable. The school was the winner of a contest sponsored by the Florida Glass Recycling Program. To encourage glass collection, the program offered a top prize of $2,000 to the elementary and middle school that collected the most glass recyclables.



Students in the sixth, seventh, and eighth grades collected approximately 3,000 pounds of glass during the contest's 6-week period. The "inside champions" in this effort were members of the school's honor society club. One eighth grade student was particularly instrumental in organizing the program.

Students brought recyclable glass containers to their homeroom, where the items were stored in boxes. When a large number of containers had been collected, teachers, parents, and the school custodian transported the glass to a recycling center. The center recorded the weight of the glass and sent a receipt to the school.

The school also received support from the entire community. As they became aware of the competition, many members of the community donated their recyclables to the school.



### Facts About Paper

Paper and paper products are the most common items in our trash. In fact, they make up over 40 percent of the national waste stream. Most of this paper ends up in landfills and incinerators but could easily be recycled.

Basically, three types of paper can be readily recycled: high-grade paper, newspaper, and corrugated cardboard. Your local waste paper market will determine what types of paper are acceptable and the value of each. For example, high-grade paper that could be recycled might include schoolwork paper, notebook paper, copier paper, computer paper, memo paper, letterhead stationery, envelopes, and typing paper.

To obtain the most value from your paper, follow the specific guidelines given by your local recycler. Otherwise, the price per pound decreases. Usually high-grade paper must be free of tape, colored paper, and paper clips. Recycled newspaper must be free from glossy magazine paper and loose paper. Corrugated cardboard should not have a wax coating, and should be clean of all packing materials.

## 4. Identify a local market for your recyclables.

Recycling involves separating reusable materials; collecting them; processing them; making them into new, usable items; and marketing them. Once the materials are back in service, the recycling "loop" is closed. Reuse of the material is critical to the success of recycling. If material is simply collected and stored, the ultimate goal of reducing the waste stream is not reached.

To find a market for your recyclables, check to see if there are any recycling facilities near your school, or any companies that recycle materials as a business. The phone book is a good source; look in the yellow pages under *recycling*, *waste paper*, *scrap* or *junk dealers*. If your area government already collects some materials and has a local municipal or county recycling coordinator, that person can also identify area markets for recyclables. You might also contact your state environmental agency for assistance in locating markets.

Once you have identified a market for your recyclables, contact the company to ask what services and payment they provide, how often they would be willing to collect items, and whether they provide transportation. The highest price per pound is not necessarily the best deal if you have to organize transportation of the collected recyclables yourself.

## Plastic Recycling: The Wave of the Future?

Plastics make up 9 percent of the national municipal solid waste stream by weight, and 20 percent by volume. Approximately half of the plastic municipal waste is packaging; the rest is nondurable consumer goods, such as disposable razor blades, and durable goods such as appliances.

There are still many uncertainties associated with the disposal of plastics. Plastic wastes are very slow to degrade in landfills, but recent data indicate that other wastes, even those considered to be "degradable," such as paper, are also quite slow to degrade.

About 1 percent (primarily plastic soft drink bottles and milk jugs) of the plastic waste stream is currently recycled. There are several obstacles to recycling plastics. For example, many objects are made up of different types of plastic material, which makes reprocessing difficult. Progress is being made, however, by plastic manufacturers and the recycling industry to improve the feasibility of plastics recycling.

In a pilot program in Lexington, Massachusetts, schools are collecting polystyrene foam lunch trays instead of discarding them. The trays are then picked up by a plastics recycling company that uses an innovative process to recycle the foam into other usable goods, such as flower pots, key chains, and benches. As this program demonstrates, plastics recycling is an emerging technology with a great deal of promise.

## 5. Work out a budget.

It does cost some money to set up any recycling program; however, these costs can often be recovered from the operation of the program. Find out if your school budget can cover the costs of launching the program. If no school designated start-up funds are available, investigate other possible sources of funding, such as the PTA, service clubs and civic organizations, local businesses, or the student body general fund. Supplies and equipment, transportation of materials, facility construction, maintenance, storage space rental, insurance, utilities, publicity, and wages for any non-volunteer help are all potential costs you need to consider. In addition, make sure that your students and anyone else participating in the program are covered by insurance in case of any accidents.

### Spotlight on Success: Flood School Stems the Paper Tide

Schools and offices are the primary sources of the paper and paper product discards that make up a large percentage of our national waste stream. The Flood Junior High School and the town of Stratford, Connecticut, decided to tackle this problem by setting up a pilot program to recycle paper in the school system.

Recycling school paper was also a logical choice since the town already has an active recycling drive for many recyclables. In addition, Stratford, like many towns, has very high waste disposal fees, and any reduction in the amount of paper flowing into the waste stream represents a savings.

The program started off on a positive note, with a visit from the State Department of Environmental Protection and "Ray Cycle," an educational entertainer who gets his recycling message across with a little song and dance. All of the students got involved in this hands-on recycling project.

Receptacles to collect homework, white, and computer paper were placed in each classroom, and emptied into a large bin in the back of the school. The collected paper was sold to a local high-grade paper buyer and recycled.

The Flood Junior High program was such a success that it is now being expanded to all 13 Stratford schools. Students from kindergarten through twelfth grade will participate in the expanded program.

**ZOWIE! Sponsored by Connecticut's Department of Environmental Protection, the recycling super hero "Ray Cycle" tours the state's elementary schools rapping about recycling and singing of solid waste issues.**

## 6. Make municipal contacts.

Since certain local ordinances may apply to school recycling programs, it is important to contact local authorities before setting up your program. If you are considering any type of in-school program, contact fire marshals regarding storage and collection logistics. For example, if you are considering recycling paper, ask if any specific storage requirements must be followed to prevent fire hazards.

You might also check with local officials to determine if your municipality can get credit for your school's recycling efforts when applying for state tonnage grants. If so, you'll need to keep records of your recycling efforts.

It is also important to identify other organizations in the community that regularly recycle. If an existing volunteer group (for example, a Girl or Boy Scout Troop or a local community group) conducts a recycling drive, be careful not to compete with its efforts, as the group may be dependent on its program for money and goodwill.

## 7. Establish a system for collecting and storing recyclables.

To keep the program running efficiently, your collection system needs to be as simple and organized as possible. Depending on the type of program you have chosen, designate logical deposit locations, either within or outside your school. You may also need to acquire, label, and place appropriate containers for the collected recyclables.

If storing recyclables at school, you'll need to provide ample storage space, preferably with truck access. A shed, garage, or even a receptacle specially designed for your type of recyclable can be used. For example, some glass recyclers have used an "igloo" type structure, and aluminum can recyclers often provide special dumpster-like storage bins. Students can also crush cans before they are stored, so that they will take up less space.

Materials also need to be properly separated, as they will bring higher prices that way. For example, newspaper often needs to be separated from magazines

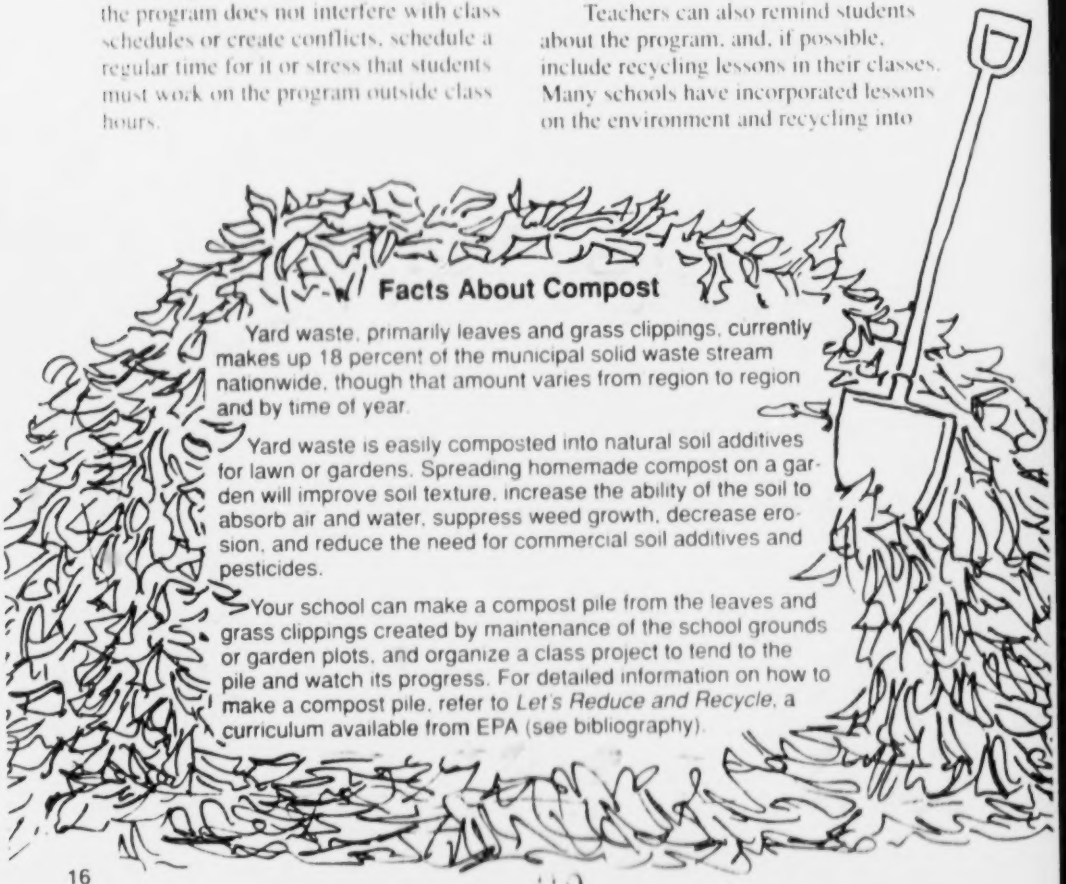
and other glossy paper, and glass containers sometimes need to have caps removed. Your recycler can specify how materials should be separated. It is important to meet their requirements in order to establish a successful, long-term relationship with them and avoid service cut-off due to unacceptable materials.

### 8. Educate the school and the community about the program.

Notify the entire staff (including all teachers, clerical staff, and custodians) and the surrounding community about the recycling program. It is a good idea to hold an explanatory session at the school to describe how the program will run and when collection will occur. You can also display examples of recyclables and storage containers. To make sure that the program does not interfere with class schedules or create conflicts, schedule a regular time for it or stress that students must work on the program outside class hours.

Publicity is essential to the success of any recycling program. At the start of your school's program, send flyers home with students to let parents know all of the specifics of the program. Encourage participation and support from local residents. Display posters, make announcements, and even have a special in-school assembly or presentation to kick off the program. Sending press releases to newspapers and radio stations, as well as making announcements in weekly shoppers, local bulletins, and club newsletters will also help inform the surrounding community. States and communities may be willing to be partners in promoting your school recycling program, so check with municipal or state officials about special publications or presentations that they may have developed about recycling.

Teachers can also remind students about the program, and, if possible, include recycling lessons in their classes. Many schools have incorporated lessons on the environment and recycling into



#### Facts About Compost

Yard waste, primarily leaves and grass clippings, currently makes up 18 percent of the municipal solid waste stream nationwide, though that amount varies from region to region and by time of year.

Yard waste is easily composted into natural soil additives for lawn or gardens. Spreading homemade compost on a garden will improve soil texture, increase the ability of the soil to absorb air and water, suppress weed growth, decrease erosion, and reduce the need for commercial soil additives and pesticides.

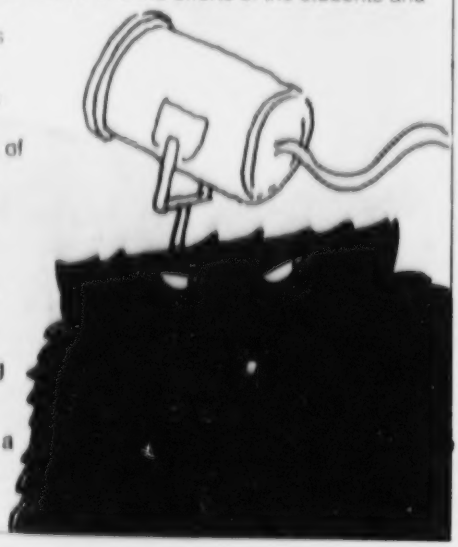
Your school can make a compost pile from the leaves and grass clippings created by maintenance of the school grounds or garden plots, and organize a class project to tend to the pile and watch its progress. For detailed information on how to make a compost pile, refer to *Let's Reduce and Recycle*, a curriculum available from EPA (see bibliography).

## Spotlight on Success: Alliance for Recycling

The Parkway School in Alliance, Ohio, recently added tin and bimetal cans to its growing list of recyclables. In addition to tin and bimetal cans, the school collects newspapers, magazines, plastic jugs, and aluminum cans. Students as well as community members bring in their recyclables during school hours, where they are stored in large colorful boxes in the hallway until the recycling coordinator transports them to the town's recycling center.

The recycling coordinator is a teacher who became interested in recycling and singlehandedly started the Parkway School program. She was recognized for her outstanding and continued contribution, and recently received the Ohio Governor's Award for Recycling. Because of her dedication and the efforts of the students and community members, the school has collected over 8,500 lbs. of recyclables so far.

But Parkway isn't the only school in Alliance participating in recycling. To encourage students to collect all types of metal cans, Keep Alliance Beautiful, a local civic organization, sponsored a "De*Can*thalon" for grades K-12. The "De*Can*thalon" is similar to a mini-Olympics, but its sporting events all involve cans. Some events were shot-put with a can, kick the can distance events, and team can-crushing relay. The entry fee for the contest was a bag of aluminum, bimetal, or tin cans per contestant. The "De-*Can*thalon" is an innovative example of how to combine a can drive with an event that's fun for everyone.



the science curriculum. If students understand the importance of recycling, they may be motivated to participate more actively in the program. The *Let's Reduce and Recycle* curriculum for grades K-12, developed by EPA in tandem with this handbook, is one example of the many teacher aids available, some of which are listed in the bibliography of this booklet.

### 9. Set overall and individual goals for the drive.

Goals are always useful for encouraging students to excel. Aim for an overall amount of recyclables to be collected, and perhaps keep a running total displayed in a prominent place to announce progress. Students, especially in primary grades, will try hard to reach goals if they know what is expected, so you could even set individual goals such as bringing in five items a week.

Maintain an accurate tally of how much each student contributes to the recycling effort. A tally will become important if your school intends to reward the doers (see Step 10). How this tally is obtained will vary according to the type of program that you run. If your school has arranged an ongoing account at a recycling center, it may agree to tally results. If, on the other hand, your school has chosen to run an in-school recycling center or conduct an occasional or one-time recycling drive, volunteers or students can record the totals.

## Spotlight on Success: A National Winner

A school recycling project was a recent national winner in the President's Environmental Youth Awards Program. The students in the 6th grade class at Maple Hill Elementary in Schodack, New York, studied the solid waste crisis in their current events class. After viewing videos, reading reports, and listening to representatives in the field, they decided to do something about the problem in their own town.

The students came up with a plan, presented it to the town supervisor, and went to work. They set up a collection center at the town landfill for bottles, cans, glass, and newsprint. Next, they publicized the program throughout the community with flyers, letters, and signs. Community residents then deposited their recyclables at the collection center.

The students identified markets for the collected recyclables. With help from landfill employees, they sorted and prepared all of the paper that the town brought to the landfill. A company that makes the paper into non-toxic cellulose insulation for homes picked up the sorted paper. Bottles and cans were returned to a store to collect the 5¢ deposit, which is placed on aluminum cans and glass bottles by state law.

To help solve the waste crisis in their own school, the students changed their paper usage habits to be less wasteful. They also collected ledger and newsprint at school, which students and teachers transported to the collection center.

Since the program began, there has been a three-fold increase in the amount of recyclables separated by the community and taken to the landfill collection center. The class found that their efforts saved over 250 cubic yards of landfill space, perhaps even prolonging the life of their landfill (which had been scheduled to close a year after they started the project).

As a result of the students' recycling program, the town formed a committee to study local waste management problems. Maple Hill Elementary also signed an official agreement with the town of Schodack to continue recycling with the town's financial support.

### 10. Reward the doers.

It is important to stress that recycling helps the environment, and that is a reward that everyone enjoys. A prize system, however, can make the recycling program even more successful. Take into account class size when establishing class prizes, so that large and small classes have equal chances of winning prizes.

Prizes can take many forms. In some programs, the winning class has received a pizza party, a trip to the zoo, school computers, or new playground equipment. In others, students were awarded 'Certificates of Appreciation' or earned Scout Badges. Prizes may be donated by local merchants, such as restaurants or manufacturers, or bought with the proceeds of the recycling drive. Individual students can also be rewarded for outstanding efforts with a bicycle or gift certificate, for example.

## The President's Environmental Youth Awards

In addition to the reward system you set up in your school, there is a national award program administered by EPA called the President's Environmental Youth Awards. This program offers young people an opportunity to be recognized for their efforts to protect the environment. A school recycling program is an excellent candidate for this award. Students can participate as individuals or as a class, from kindergarten through twelfth grade. The projects must have an adult sponsor who will advise and guide students.

The program has two components: the regional certificate program and the national awards competition. All participants in the President's Environmental Youth Awards Program receive a certificate from the President of the United States, awarded by EPA's Regional Offices. If a project produces exceptional results, sponsors are encouraged to enter it into the national competition. Ten national winners are selected annually. Two representatives from each winning project—a student and the sponsor—are invited to Washington, DC (expenses paid) for an awards ceremony and 3 days of work and fun.

Applications for the regional certificate program are accepted throughout the year. For the national competition, project applications are due by July 31 of each year.

To learn more about the President's Environmental Youth Awards Program, or to obtain applications, contact the EPA Regional Office that services your state (see list in bibliography) or write to the EPA Public Information Center, 401 M Street SW, Washington, DC 20460.

The students of today are the decision-makers, manufacturers, business persons, and homeowners of tomorrow. Through the use of a well-designed recycling program, students can come to understand the problems associated with solid waste, and how they can initiate real world solutions to resolve these problems. Individuals of all ages can learn how to work together to preserve the environment for future generations.

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### EPA Sources

The following documents are available from EPA's RCRA Hotline at no charge (800-424-9346):

*Be An Environmentally Alert Consumer*. EPA/530-SW-90-034B. A handy booklet describing approximately 100 practical steps that consumers can take to reduce the amount and toxicity of the trash they generate. A concise pamphlet that summarizes the booklet is also available. (EPA/530-SW-90-034A)

*Bibliography of Municipal Solid Waste Management Alternatives*. EPA/530-SW-89-055. A listing of approximately 200 publications available from industry, government, and environmental groups.

*Recycling*. EPA/530-SW-88-050. A concise citizen's brochure on recycling and its role in solid waste management.

*Recycling Works!* EPA/530-SW-89-014. A booklet describing 14 successful state and local recycling programs in the United States.

*The Solid Waste Dilemma: Solutions for the 90s*. EPA/530-SW-90-058. This booklet presents a national strategy for managing municipal solid waste and describes steps that government, industry, and the public can take to help resolve the problem. (Available midsummer 1990)

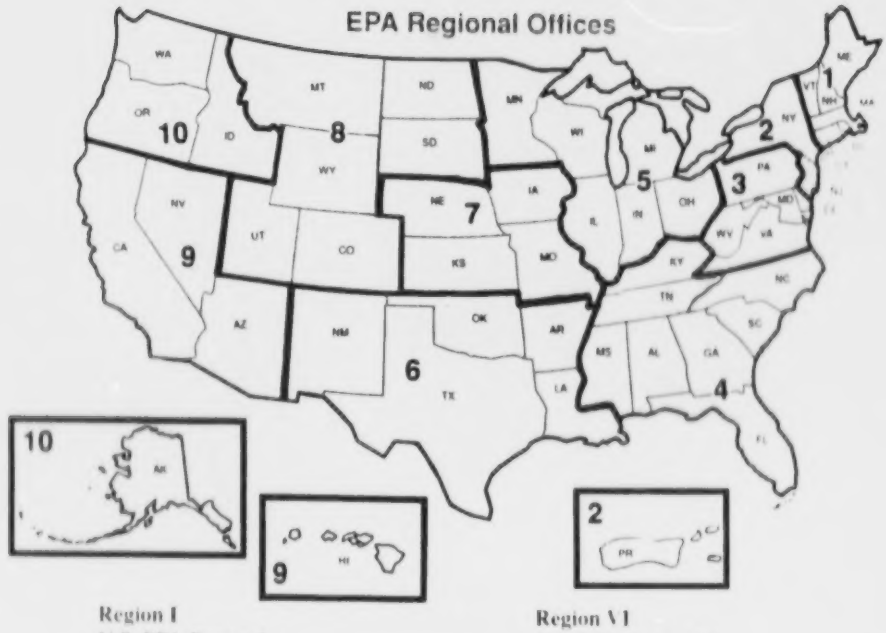
**Educational Materials Available from the Hotline:**

*Recycle Today! Educational Materials for Grades K-12.* EPA/530-SW-90-025. Presents the goals and objectives of EPA's School Recycling Program, and describes this handbook as well as the following materials.

*Let's Reduce and Recycle: Curriculum for Solid Waste Awareness.* EPA/530-SW-90-005. Presents lessons and activities to teach students in grades K-12 about solid waste generation and management. Each unit presents a series of related lessons with vocabulary words, discussion questions, and projects. Practical teaching aids, such as handouts, worksheets, clip art, and a short skit are also included, along with a bibliography of additional sources of information.

*Adventures of the Garbage Gremlin: Recycle and Combat a Life of Grime.* EPA/530-SW-90-024. Introduces students in grades 4-7 to the benefits of recycling through an engaging comic book approach. Students are lead on an adventure in which their peers foil the "Garbage Gremlin" and learn about recycling.

*Ride the Wave of the Future: Recycle Today!* EPA/530-SW-90-010. Promotes recycling through a colorful poster designed to appeal to all grade levels. Can be displayed in conjunction with recycling activities or used to help foster recycling.

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